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(12) **United States Patent**  
**Domenig et al.**(10) **Patent No.:** **US 6,626,305 B2**  
(45) **Date of Patent:** **\*Sep. 30, 2003**(54) **ROTARY SHELF ASSEMBLY MECHANISM HAVING A POST HEIGHT ADJUSTMENT DEVICE AND A NOVEL SHELF CONSTRUCTION AND SHELF RETAINING ELEMENT FOR SECURING THE SHELVES TO THE POST**(76) **Inventors:** **Georg Domenig**, 1110 Whispering Pines, Kernersville, NC (US) 27284;  
**James Rapier**, 109 Shamrock Dr., Salisbury, NC (US) 28144(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/640,052, filed on Aug. 17, 2000, now abandoned.

(51) **Int. Cl.<sup>7</sup>** ..... **A47F 5/02**(52) **U.S. Cl.** ..... **211/144; 211/95; 211/163; 211/131.1; 211/129.1**(58) **Field of Search** ..... **211/95, 163, 207, 211/208, 131.1, 129.1, 78, 144; 403/109.1, 109.2, 109.4, 379.3, 378; 312/305; 248/250**(56) **References Cited****U.S. PATENT DOCUMENTS**918,579 A \* 4/1909 Murch ..... 248/353  
2,124,842 A \* 7/1938 Zierold et al. .... 135/26  
2,350,582 A \* 6/1944 Booth ..... 403/379.3  
2,423,577 A \* 7/1947 Booth ..... 403/379.33,628,844 A \* 12/1971 Preston ..... 312/305  
4,433,885 A 2/1984 Baker  
4,486,106 A \* 12/1984 Benting ..... 384/248  
4,572,595 A 2/1986 Craig  
4,587,908 A 5/1986 DeBruyn  
4,616,940 A 10/1986 DeBruyn  
4,688,686 A \* 8/1987 Mitts et al. .... 211/183  
4,819,900 A \* 4/1989 Funk ..... 248/244  
5,050,746 A \* 9/1991 Frankel ..... 211/34  
5,287,869 A \* 2/1994 Wu ..... 135/25.1  
5,312,003 A 5/1994 Domenig  
5,354,025 A \* 10/1994 McCaffrey ..... 248/188  
5,494,346 A 2/1996 Domenig  
5,702,198 A \* 12/1997 Kuo ..... 403/377  
5,931,315 A \* 8/1999 Lorentz et al. .... 211/40  
5,941,399 A \* 8/1999 Wang ..... 211/187  
6,017,108 A 1/2000 Domenig

\* cited by examiner

*Primary Examiner*—Gregory J. Strimbu

(57)

**ABSTRACT**

A rotary shelf assembly mechanism has shelves mounted on a vertical post arrangement formed by a first lower post and a second upper post. The mechanism is connected to a cabinet by upper and lower mounting brackets interacting with the top and bottom of the cabinet to support the posts and shelves carried thereby. The mechanism is mounted in the corner of the cabinet. To fit the mechanism within the cabinet, a height adjustment device is formed by positioning the second upper post in the upper end of the first lower post for slidable movement therebetween. When securement of the two joined posts and mounted shelves is desired, the slidably movable second upper post is extended upwardly until it engages the upper mounting bracket mounted on the cabinet. An elongated recess in the second upper post aligns with an opening in the first lower post, and a threaded member extends into a casting positioned within the upper post. The threaded member is tightened to engage the casting and secure the two posts in a shelf-retaining and rotational mode. The height adjustment device enables quick and efficient installation of the mechanism within the cabinet interior. The mechanism also includes a one piece shelf construction having a post-securing section and a shelf-retaining pin.

**4 Claims, 10 Drawing Sheets**